Children's Hospital of Philadelphia
PolicyLab

New COVID-19 Projections Put School Reopening in Question in Many U.S. Counties, Provide Roll-back Scenarios

Philadelphia, Pa. – July 15, 2020 – New projections released today by PolicyLab at Children's Hospital of Philadelphia (CHOP) forecast a continued surge in COVID-19 cases over the next four weeks in many areas of the country, with renewed risk spreading into the Northeast and Midwest, threatening our ability to safely reopen schools and universities if strong mitigation policies are not instituted.

The new data show most hotspots, including communities across Texas, Florida, Tennessee, Mississippi and the Carolinas, have not increased their social distancing enough in the last week to reduce their risk for continued resurgence in the coming weeks. New epicenters are forming in Louisiana and Georgia as cases surge in counties surrounding New Orleans and Atlanta, compromising the ability these cities have had thus far in staving off widespread transmission with vigilance in masking and distancing. COVID-19 case projections for many college towns, including Tuscaloosa, Ala., and Ann Arbor, Mich., are increasing in advance of the majority of students returning to campus. Yet, the researchers are most concerned by worsening forecasts in Maryland, Virginia and Washington, D.C—which have projections that look like those of North Carolina just a few weeks ago—and emerging risk for resurgence in Philadelphia, Newark, NJ, and New York City. They also observed the first signs of renewed risk for counties in Connecticut and Massachusetts as the epidemic spreads from the west and south.

Notably, many areas the researchers are monitoring across Arizona and California, including Phoenix and Sacramento, saw an increase in social distancing over the past week, which led to slightly improved forecasts in the model. This trend illustrates just how effective of an intervention distancing can be in reducing widespread transmission of COVID-19.

The researchers also released new projections for 158 of our largest counties' modeling scenarios that show how instituting universal masking and tightening social distancing and occupancy policies might affect our ability to neutralize the surging epidemic to get people back to work and children back to school in the fall. These new forecasts model scenarios reflecting guidance recently shared with state governments by the White House Coronavirus Task Force, for whom the scenarios were prepared. However, even if an epicenter like Houston, for example, chose the most aggressive mitigation strategy of mandating mask wearing, closing bars and gyms, limiting gathering sizes to 10 people, and reducing restaurant occupancy to 25%, they would reverse the trend of their epidemic, but could still see more than 650 cases daily in early August.

"There is a lot riding on the decisions our policymakers and fellow citizens make this week if we still hope to safely return teachers and students to the classroom for the fall semester," said David Rubin, MD, MSCE, director of PolicyLab at CHOP and a professor of Pediatrics at the University of Pennsylvania's Perelman School of Medicine. "Whether you live in a hotspot or a community that is just starting to see renewed signs of COVID-19 resurgence, now is the time to implement universal masking and assess how much you need to restrict gathering sizes and increase social distancing if we are to stop the sweep of this epidemic and get America back on track for achieving its goal of reopening schools and getting more people back to work."

For additional comments from lead investigators Dr. Rubin, Dr. Gregory Tasian, and Dr. Jing Huang on their updated forecasts and findings, read this blog post: https://policylab.chop.edu/blog/covid-19-outlook-mounting-

response-its-too-late

Background

Researchers at PolicyLab at CHOP and the University of Pennsylvania developed the model, known as COVID-Lab: Mapping COVID-19 in Your Community, which tracks and projects COVID-19 transmission across 519 U.S. counties with active outbreaks, representing 71% of the U.S. population and 88% of all identified coronavirus cases. The researchers built their model to observe how social distancing, population density, daily temperatures, and humidity affect the number and spread of COVID-19 infections over time across a county, accounting for test positivity rates and population characteristics such as age, insurance status, crowding within homes and diabetes prevalence. COVID-Lab's projections forecast the number of coronavirus cases communities could experience over the next four weeks based on a three-day average of their current social distancing practices, defined by the change in travel to non-essential businesses as compared to pre-epidemic. A scientific review of the team's model and findings is available as a pre-print article ahead of peer review on medRxiv. The data are publicly available in the form of interactive maps and graphs.

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About PolicyLab at Children's Hospital of Philadelphia: PolicyLab at Children's Hospital of Philadelphia (CHOP) is dedicated to achieving optimal child health and well-being by informing program and policy changes through interdisciplinary research. Founded in 2008, PolicyLab is a Center of Emphasis within the CHOP Research Institute, one of the largest pediatric research institutes in the country. With more than 30 highly regarded faculty and 60 passionate staff who bring expertise from myriad of fields covering health, research and health policy, our work focuses on improving public systems, improving health care delivery and improving child health outcomes. For more information, visit **http://www.policylab.chop.edu**.

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